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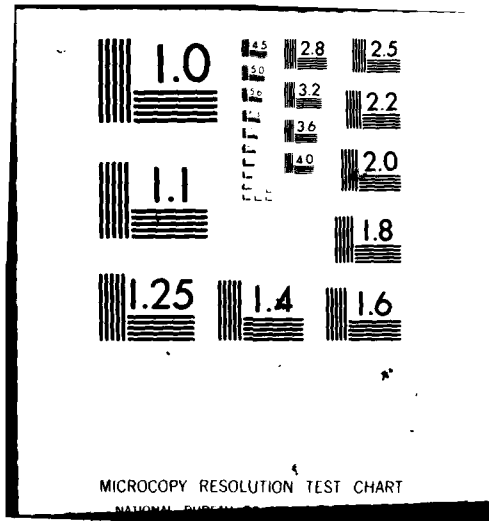
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HEALTH CARE STUDIES DIVISION REPORT #80-004

A STUDY TO DETERMINE THE OPTIMAL FREQUENCY
FOR CONDUCTING PERIODIC DENTAL EXAMINATIONS
RECRUIT NEEDS
(Part II)

(Short title: OFDEM)

by

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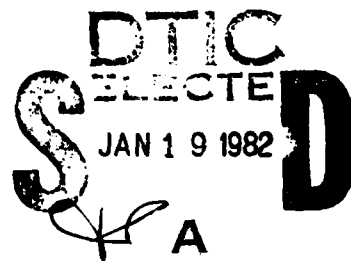
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The primary purpose of this part of the study was to obtain an estimate of the dental care needs of Army recruits (less than two years of service) by numbers and types of care, by hours of treatment time, and by subgroups according to age and sex. The data was collected from a small sample (312) representing males and females who reported for a dental examination during a one-month period, who had not yet received any definitive dental care since entering on active duty. The AOHMP mechanism was used as the sample selection mechanism. The clinical data collected consisted of dental care needs in all treatment		

areas except orthodontics. The heaviest requirements were for restorative care and the bulk of this was simple one-surface restorations. The ratio by sex was unbalanced with a smaller proportion of females than desired. The distribution of the sample among the two age groups is unbalanced in favor of the younger age group. The sample size is small and biased; the conclusions cannot be considered as a reliable indicator of potential dental needs of incoming Army personnel.

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SUMMARY

This study (Parts I and II) was requested by the Assistant Surgeon General and Chief, Army Dental Corps and by the Directorate of Dental Services, United States Army Health Services Command (HSC). The Health Care Studies Division (HCSD), Academy of Health Sciences (AHS) was tasked to perform the study by the Commander, Health Services Command. The purpose of the complete study was to recommend an optimum frequency for mandatory dental examinations by determining the dental care needs of individuals according to the interval length since their last completed care sequence.

The objective of this phase of the study was to determine the dental care needs of recent inductees to the Army who had received no definitive dental care since entering on active duty. Data for the survey were collected at ten Army installations. These sites were selected for a balance of population size and mission. The Army Oral Health Maintenance Program (AOHMP), an important feature of which is a mandatory annual dental examination for all active duty personnel, was the sample selection mechanism.

The sample size for this portion of the study is 312. This population represents all persons, male and female, who reported for a dental examination during a one-month period who also fit the definition of inductee (recruit). A listing of their dental care needs at that time was made, and a treatment plan was designed to restore them to reasonably optimal dental and oral health. Distributions of the 13 treatment and three radiographic categories for care needed and hours required to deliver that care are provided for the total sample, for the sample by age grouping and by sex. Analysis of variance (ANOVA) tests were performed to test for significant differences between means.

The data showed that the older age group had generally higher needs. Rank was not a factor since almost the entire sample consisted of enlisted personnel early in their first tour of duty. The number of females was small in relation to the entire sample but in general their overall care needs were less than for males. The results of this study indicate that the dental and oral health of today's young soldier may be improved over his predecessors but also that a large more in-depth study is required to confirm or refute this finding.

The sample size is small and biased; the conclusions cannot be considered as a reliable indicator of potential dental needs of incoming Army personnel, and the AOHMP is not the appropriate sample selection mechanism.

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I. INTRODUCTION.

A. Purpose.

1. This study was part of another study effort, the purpose of which was to determine the optimum interval between mandatory dental examinations. The results of that study are presented in a separate report. The primary purpose of this phase was to obtain a current estimate of the dental care needs of Army recruits (less than two years of service) by numbers and types of care, by hours of treatment time, and by subgroups according to age and sex.

2. This information will be useful to the Assistant Surgeon General for Dental Services, Office of the Surgeon General, DA, and the Directorate for Dental Services, US Army Health Services Command, in planning for future needs both in terms of personnel specialty mixes and staffing guides.

B. Background.

1. US Army dental resources are allocated to installations based upon assigned military strength. The estimated dental needs of that population are not taken into account. Though the population mix at Army installations varies somewhat, the types of individuals assigned to a particular site remain quite constant unless the mission of that post changes. Therefore it is reasonable to assume that the dental care needs at a particular installation in terms of the kinds of care required and the volume will not change drastically over the short term.

2. By knowing the dental care needs of individuals entering the Army, the resources required to provide care can be estimated and projected ahead. The dental care needs of the regular (career) soldier have been documented in another recent study.¹ Taken together, personnel and other resources which are required to satisfy the needs of the active Army can be accurately known and adjustments made when necessary.

3. The population sample upon which this report is based is small. Although an attempt was made at randomization the sample may be biased because it depended upon an individual appearing for a required annual examination. Since the sample consists of individuals who have been in the Army for less than one year and who reported for their first required examination, it could be said that the sample is comprised heavily of dentally motivated individuals and thus biased toward less than average dental needs. To obtain truly random data would require a much larger study at recruit training centers by a small group of examiners.

II. OBJECTIVES.

The objectives of this study were:

1. To obtain by means of a clinical dental survey the dental treatment needs of US Army active duty personnel who had not yet received any definitive dental care since entering on active duty.

2. To analyze the sample by age grouping and sex in order to determine the care needs for each subgroup by type of treatment, volume of each type, and by treatment hours required to complete all care.

III. METHODOLOGY.

A. Overview. The basic approach to this portion of the study was to select dental health records of active duty personnel who had not received definitive dental care subsequent to their entry on active duty. These subjects would all be early in their first enlistment and would be undergoing their first mandatory annual dental examination. These records were reviewed and demographic information recorded as well as other data vital to the study effort. Ten DENTACs representing varying dental support missions were included as study sites.

B. Data Collection.

1. The data collection instrument designed for this study may be found at Appendix A. The form design permitted keypunch (keytape) operators to transfer the data directly and eliminated possible miscoding errors which may result when data must be re-coded.

2. The AOHMP mechanism was used as the basic data source. From the pool of records for those persons with a common preselected birth month, those Army members who had received only an initial dental examination upon entry on active duty but had not received any dental care (except emergency) were tagged. The cutoff initial entry date was 1 January 1977. These records were tagged and identified as source documents. Dental care needs for these individuals were recorded at their annual dental examination.

3. The data collected consisted of demographic information including patient identifier (last four digits of the social security number), installation and clinic identifier, age, sex, and rank. Clinical data collected consisted of the dental care needs in all treatment areas except orthodontics. For a complete listing of this data refer to Appendix A the data collection instrument.

4. Data was collected from ten HSC DENTACs which represent medium and large size military populations and a variety of training missions. Though data was collected and identified by installation it was not intended to be tabulated or analyzed individually. Therefore only summary data was subjected to analysis.

C. Data Analysis.

1. Descriptive statistics were used in the analysis of the data. Analysis of Variance (ANOVA) was also used to determine if differences between means were significant. Though sex was a dependent variable, significance testing based upon this variable was not done since the number of females was very small in comparison to the number of males.

2. The data was transferred to punched cards by the Production Division, Health Information and Biostatistical Activity, HSC. The System Design and Analysis Branch, Directorate of Combat Developments and Health Care Studies, provided computer support using the in-house on-line terminal of a CDC 6500 computer located at Fort Leavenworth, Kansas. The preprogrammed Statistical Package for the Social Sciences was used for data analysis. Programming support was obtained from within the Health Care Studies Division.

IV. FINDINGS.

A. Sample characteristics.

A sample of 312 records belonging to individuals classified as recruits were examined. Of this total, 47 had no age recorded so that 255 records could be analyzed by age grouping. Table 1 shows the dental care needs broken down into individual categories for both age groups as well as for those for whom no age was available. It can be seen that except for the need for Removable Partial Dentures (V 13) and Scalings (V 18) there were no significant differences between the age groups in care needs. When the "ageless" category was analyzed other changes are noted. Significant differences were noted in the additional categories of one-surface restorations (V 07) and Jackets/Crowns (V 10) as compared to the overall population mean. There was no significant difference between the "ageless" group and the overall population mean in the need for scalings (V 18). No attempt was made to further analyze these differences since the individuals in the "ageless" category could not be further identified.

B. Care needs by age and sex.

Table 2 provides descriptive statistical information about the dental care needs for recruits by age group and by sex. This data, as noted earlier, was not subjected to any further analysis or significance testing because the number of females in both groups was very small in comparison to the number of males. The three females in Group 2 required substantial care needs in the restorative area and in extractions when compared to the males in Group 2 however.

C. Absolute care requirements.

Table 3 lists care requirements in absolute numbers. It can be seen that the heaviest requirements are for restorative care, and the bulk of this is simple one-surface restorations. The need for prophylaxis and scalings is also large, but this is not unexpected since previous studies have shown that around 90% of the dentulous population requires this type of care at least annually.

D. Mean time requirements for the total sample.

The mean time (in hours) required to deliver needed care to recruits is presented in Table 4. Though in most areas Group 2 requires more care time in absolute terms, there are significant differences only in the areas of Removable Partial Dentures (V 13) and Scalings (V 18). The

mean overall time required to deliver needed restorative care totals slightly less than two hours per person. Requirements in other specialty areas are light since there were rather slight needs. It is interesting to note however that the older age group required a mean figure of 1.20 hours more total care time than the younger age group.

E. Mean time requirements by sex and age.

Table 5 presents the mean time (in hours) required to deliver needed care to males and females within the two age groups. Again, since the number of females in both groups was small in comparison to the number of males, no other testing was done on this data. It is interesting to note however that in the younger group (Group 1) males generally required more treatment time than females. It would be interesting to learn if this would hold true with a larger sample of females. The reverse was true in Group 2 however the small sample of females had inordinately large care needs compared to the males. This situation is probably an anomaly and would not hold with a larger sample size. Table 6 presents a breakdown of hours required to deliver the needed care by sex, regardless of age. The greater needs of the small number of females in the older age group showed up here, reversing the trend which saw males with greater needs in the younger age group.

F. Mean needs: recruits vs regulars.

In Table 7 the mean needs in the various care categories for recruits and regulars are shown. The recruit population has a significantly greater need for all categories of restorative care, for jackets/crowns, for extractions, anterior and posterior endodontics, and scalings (V 07, 08, 09, 10, 14, 15, 16, 19). These findings are not unexpected since the regular Army population has had greater access to dental care as one of its benefits. The civilian population, from whence the recruit population recently came, does not have this access to the same degree.

V. DISCUSSION.

A. Sample characteristics.

1. Since the Army is a fluid organization with a high turnover of personnel, a significant proportion of its members are recent entrants onto active duty. Since the strategy of the study to determine an optimum frequency for dental examinations involved a determination of care needs, it followed that recently inducted personnel could be evaluated concurrently. These personnel would have no prior examination or other dental treatment history in their short Army careers, but by determining their dental care needs valuable information about future dental resource requirements might be obtained.

2. Though the size of the sample is not large (312) it is sufficient from which to draw reasonable but guarded conclusions. The distribution of the sample among the two age groups is unbalanced in favor of the younger group. An arbitrary age of 23 years was chosen as the upper and lower limits of the respective age groups. The fact that in general the older age group has greater care needs was not expected. Discounting the three females who

comprised the entire female portion of that group, the males also were found to have greater dental needs than the males in the younger age group.

3. The mean need for complete dentures is exactly the same in this study as in two previous studies. The figure is very low. This is continuing evidence of the progress made in recent years which has greatly reduced the number of complete dentures needed by the general population and even more so by the younger age group which formerly lost more teeth to the ravages of decay.

4. The need for extractions (excluding asymptomatic third molars) and for endodontia is reported to be very similar to that documented in an earlier study. However, it is considerably lower than an Air Force study of the same time period (1977). The reason for the latter disparity is unknown; however, the trend indicated by the need for fewer restorations might be projected to conclude that less decay also leads to a lesser need for extractions and for treating teeth threatened by deep and extensive caries.

5. The need for preventive care (prophylaxis and scaling) remains remarkably steady. This type of care is unlike most other types of definitive care because it is a maintenance procedure which cannot be avoided nor is the cause entirely preventable. The high need in diverse populations documented at wide intervals indicates the pervasiveness of plaque and calculus and does not portend a worsening situation.

6. The study results reported a very slight need for full mouth radiographic surveys (overall mean = .07) and a mean requirement for panoramic radiographic surveys of .26. These figures are interesting and relevant because they are some indication of the patient's need for periodontal and prosthodontic care. They are probably significant because the mean requirements for these types of care were very low.

VI. CONCLUSIONS.

A. The dental care needs of a small sample of recently inducted male and female Army members have been determined. The hours of care required to provide that care have been calculated.

B. The average total hours of treatment required per individual is approximately 3.7 hours regardless of age or sex.

C. The sample was small in relation to the total Army and also in relation to the total number of persons inducted into the Army annually. The ratio by sex was unbalanced with a smaller proportion of females than desired.

D. The sample represents a strong bias towards individuals who responded to an annual examination notice.

E. This report should only be regarded as a pilot attempt to collect care needs data about Army recruits using the AOHMP as the sampling processes.

The estimates of potential need should be viewed only as crude estimates gathered from a biased sample of personnel who had not previously entered the Army dental care delivery system. The needs do not represent a valid reliable set of data gathered from an adequate, randomly selected, recruit population.

VII. RECOMMENDATIONS.

A. This report of a pilot study should not be considered a reliable indicator of potential dental needs of incoming Army personnel.

B. Because the results differ in some important respects from earlier studies of similar populations a larger study of the dental needs of recent inductees should be conducted at an early date.

C. Future studies should be designed with the specific goal of determining recruit needs. The AOHMP mechanism is not appropriate for obtaining an adequately large or representative sample.

VIII. REFERENCES.

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3. Christen, A.G.; Parks, P.R.; Graves, R.C.; Young, J.M.; and Rake, A.J. "United States Air Force Survey of Dental Needs: 1977: Methodology and Summary of Findings." JADA, 98:726, May 1979.
4. Cassidy, J.E.; Parker, W.A.; and Hutchins, D.W. "Dental Care Requirements of Male Army Recruits." Military Medicine, 138:25, January 1973.

TABLES

TABLE 1

DENTAL CARE NEEDS FOR RECRUITS BY AGE GROUPS

GROUP 1 - 23 YRS AND UNDER (N = 213)

GROUP 2 - 24 YRS AND ABOVE (N = 42)

GROUP 0 - NO AGE GIVEN (N = 57)

	MEAN GROUP 1	MEAN GROUP 2	MEAN 1 AND 2	SIG DIFF*	MEAN GROUP 0	MEAN OVERALL	SIG DIFF*
V07 - 1 SURF REST	2.66	3.74	2.84	NO	2.02	2.69	YES
V08 - SURF REST	.86	1.19	.91	NO	1.07	.94	NO
V09 - 3 + SURF REST	.20	.28	.22	NO	.42	.25	NO
V10 - JACKETS/CROWN	.06	.05	.06	NO	.31	.10	YES
V11 - FX BR ABUTS	.11	.05	.10	NO	.24	.12	NO
V12 - COMP DENT	.009	0	.008	NO	.03	.01	NO
V13 - REM PAR DENT	.02	.14	.04	YES	.03	.04	YES
V14 - EXTRACTIONS	.42	.74	.47	NO	.57	.49	NO
V15 - ANT ENDO	.05	0	.04	NO	.12	.06	NO
V16 - POST ENDO	.04	.02	.04	NO	.14	.06	NO
V17 - PROPHYLAXIS	.92	.95	.92	NO	.87	.91	NO
V18 - SCALING	.74	.88	.76	YES	.79	.76	NO
V19 - PERIO TX	.05	.12	.06	NO	.10	.07	NO
V20 - BITE WINGS	.92	.95	.92	NO	.87	.91	NO
V21 - FULL MOUTH	.05	.09	.06	NO	.08	.07	NO
V22 - PANORAMIC	.31	.40	.32	NO	.26	.31	NO

*One-way Analysis of Variance, $p < .05$

TABLE 2

DESCRIPTIVE STATISTICS

DENTAL CARE NEEDS FOR RECRUITS BY AGE GROUP AND SEX

GROUP 1 - 23 YRS AND UNDER

Male N = 198

Female N = 15

GROUP 2 - 24 YRS AND ABOVE

Male N = 39

Female N = 3

			<u>GROUP 1</u>		<u>GROUP 2</u>	
			MEAN	S.D	MEAN	S.D.
V07 - 1 SURF REST	M		2.79	3.33	3.64	4.08
	F		1.00	1.64	5.00	6.92
V08 - 2 SURF REST	M		.89	1.26	1.10	1.39
	F		.40	1.05	2.33	1.52
V09 - 3 + SURF REST	M		.20	.67	.20	.52
	F		.26	.59	1.33	1.55
V10 - JACKETS/CROWNS	M		.06	.35	.05	.22
	F		.06	.25	0	0
V11 - FX BR ABUTS	M		.12	.62	.05	.32
	F		0	0	0	0
V12 - COMP DENT	M		.01	.14	0	0
	F		0	0	0	0
V13 - REM PAR DENT	M		.02	.17	.10	.38
	F		.06	.25	.66	1.15
V14 - EXTRACTIONS	M		.43	1.08	1.69	1.48
	F		.20	.77	1.33	2.30
V15 - ANT ENDO	M		.05	.47	0	0
	F		0	0	0	0
V16 - POST ENDO	M		.04	.25	.02	.16
	F		0	0	0	0
V17 - PROPHYLAXIS	M		.92	.26	.94	.22
	F		.86	.35	1.00	0
V18 - SCALING	M		.74	.43	.87	.33
	F		.60	.50	1.00	0
V19 - PERIO TX	M		.05	.22	.12	.33
	F		0	0	0	0
V20 - BITE WINGS	M		.91	.28	.94	.22
	F		1.00	0	1.00	0
V21 - FULL MOUTH	M		.06	.23	.07	.27
	F		0	0	.33	.57
V22 - PANORAMIC	M		.31	.46	.41	.49
	F		.20	.41	.33	.57

TABLE 3

TOTAL DENTAL CARE NEEDS OF RECRUITS BY AGE GROUP AND COMBINED

GROUP 1 - 23 YRS AND UNDER (N = 213)

GROUP 2 - 24 YRS AND ABOVE (N = 42)

GROUP 0 - NO AGE RECORDED (N = 57)

	GROUP 1	GROUP 2	TOTAL	GROUP 0	GRAND TOTAL
V07 - 1 SURF REST	568	157	725	115	840
V08 - 2 SURF REST	183	50	233	61	294
V09 - 3 + SURF REST	44	12	56	24	80
V10 - JACKETS/CROWNS	14	2	16	18	34
V11 - FX BR ABUTS	24	2	26	14	40
V12 - COMP DENT	2	0	2	2	4
V13 - REM PAR DENT	5*	6*	11	2	13
V14 - EXTRACTIONS	90	31	121	33	154
V15 - ANT ENDO	11	0	11	7	18
V16 - POST ENDO	9	1	10	8	18
V17 - PROPHYLAXIS	196	40	236	50	286
V18 - SCALING	157*	37*	194	45	239
V19 - PERIO TX	11	5	16	6	22
V20 - BITE WINGS	196	40	236	50	286
V21 - FULL MOUTH	12	4	16	5	21
V22 - PANORAMIC	66	17	83	15	98

TOTAL NUMBER OF RESTORATIONS NEEDED 1114 (OVERALL MEAN: 3.57)

TOTAL NUMBER OF JACKETS, CROWNS, BR ABUTS NEEDED. 74

PERCENT REQUIRING PROPHYLAXIS 91.6%

PERCENT REQUIRING SCALING 76.6%

EXTRACTIONS NEEDED OVERALL MEAN: .49

*SIG DIFF BETWEEN AGE GROUPS (ANOVA, $p < .05$)

TABLE 4

HOURS REQUIRED TO DELIVER CARE NEEDS TO RECRUITS BY AGE GROUP

GROUP 1 - 23 YRS AND UNDER N = 213

GROUP 2 - 24 YRS AND ABOVE N = 42

	MEAN GROUP 1	MEAN GROUP 2	MEAN OVERALL	SIG DIFF*
V07 - 1 SURF REST	.9333	1.3083	.9951	NO
V08 - 2 SURF REST	.7131	.9881	.7584	NO
V09 - 3 + SURF REST	.1715	.2371	.1823	NO
V10 - JACKETS/CROWNS	.1295	.0938	.1236	NO
V11 - FX BR ABUTS	.2220	.0938	.2000	NO
V12 - COMP DENT	.0303	0	.0253	NO
V13 - REM PAR DENT	.0462	.2814	.0850	YES
V14 - EXTRACTIONS	.1014	.1771	.1139	NO
V15 - ANT ENDO	.1033	0	.0863	NO
V16 - POST ENDO	.1268	.0714	.1176	NO
V17 - PROPHYLAXIS	.3405	.3524	.3424	NO
V18 - SCALING	.1400	.1674	.1445	YES
V19 - PERIO TX	.3439	.7929	.4179	NO
V20 - BITE WINGS	.1104	.1143	.1111	NO
V21 - FULL MOUTH	.0225	.0381	.0251	NO
V22 - PANORAMIC	.0341	.0445	.0358	NO
TOTAL HOURS	3.5688	4.7606	3.7652	

*ANOVA, $p < .05$

TABLE 5
DESCRIPTIVE STATISTICS
HOURS REQUIRED TO DELIVER CARE NEEDS TO RECRUITS BY AGE GROUP AND SEX

GROUP 1 - 23 YRS AND UNDER

Male N = 198

Female N = 15

GROUP 2 - 24 YRS AND ABOVE

Male N = 39

Female N = 3

		<u>GROUP 1</u>		<u>GROUP 2</u>	
	SEX	MEAN	S.D	MEAN	S.D
V07 - 1 SURF REST	M	.9775	1.1655	1.2744	1.4307
	F	.3500	.5766	1.7500	2.4249
V08 - 2 SURF REST	M	.7420	1.0458	.9151	1.1550
	F	.3320	.8761	1.9367	1.2678
V09 - 3 + SURF REST	M	.1677	.5608	.1703	.4334
	F	.2213	.4927	1.1067	.9584
V10 - JACKETS/CROWNS	M	.1293	.6897	.1010	.4402
	F	.1313	.5087	0	0
V11 - FX BR ABUTS	M	.2388	1.2324	.1010	.6309
	F	0	0	0	0
V12 - COMP DENT	M	.0326	.4591	0	0
	F	0	0	0	0
V13 - REM PAR DENT	M	.0398	.3415	.2021	.7556
	F	.1313	.5087	1.3133	2.2748
V14 - EXTRACTIONS	M	.1055	.2598	.1662	.3575
	F	.0480	.1859	.3200	.5543
V15 - ANT ENDO	M	.1111	.9494	0	0
	F	0	0	0	0
V16 - POST ENDO	M	.1364	.7584	.0769	.4804
	F	0	0	0	0
V17 - PROPHYLAXIS	M	.3420	.0982	.3510	.0827
	F	.3207	.1302	.3700	.0000
V18 - SCALING	M	.1420	.0828	.1656	.0644
	F	.1140	.0963	.1900	.0000
V19 - PERIO TX	M	.3700	1.5294	.8538	2.2557
	F	0	0	0	0
V20 - BITE WINGS	M	.1097	.0337	.1138	.0268
	F	.1200	.0000	.1200	.0000
V21 - FULL MOUTH	M	.0242	.0957	.0308	.1080
	F	0	0	.1333	.2309
V22 - PANORAMIC	M	.0350	.0514	.0451	.0548
	F	.0220	.0455	.0367	.0635

TOTAL MEAN TIME REQUIRED MALE GROUP 1 - 3.7036

TOTAL MEAN TIME REQUIRED FEMALE GROUP 1 - 1.7906

TOTAL MEAN TIME REQUIRED MALE GROUP 2 - 4.5671

TOTAL MEAN TIME REQUIRED FEMALE GROUP 2 - 7.3307

TABLE 6
HOURS REQUIRED TO DELIVER NEEDED DENTAL CARE TO RECRUITS
BY SEX REGARDLESS OF AGE

Male N = 288
Female N = 24

	<u>MALE</u>		<u>FEMALE</u>	
	MEAN	S.D.	MEAN	S.D.
V07 - 1 SURF REST	.9661	1.1721	.6562	1.0889
V08 - 2 SURF REST	.7580	1.1052	1.0721	1.8394
V09 - 3 + SURF REST	.1931*	.5573	.4496*	.8471
V10 - JACKETS/CROWNS	.1778*	.9565	.6567*	2.1476
V11 - FX BR ABUTS	.2736	1.2868	0	0
V12 - COMP DENT	.0224*	.3807	.2692*	1.3186
V13 - REM PAR DENT	.0616*	.4147	.3283*	.9486
V14 - EXTRACTIONS	.1192	.2740	.1100	.2646
V15 - ANT ENDO	.1042	.8366	.2500	1.2247
V16 - POST ENDO	.1458	.7784	.5000	1.9111
V17 - PROPHYLAXIS	.3405	.1005	.3238	.1250
V18 - SCALING	.1465	.0800	.1346	.0882
V19 - PERIO TX	.4856	1.7346	.2775	1.3595
V20 - BITE WINGS	.1096	.0338	.1150	.0245
V21 - FULL MOUTH	.0278	.1019	.0167	.0816
V22 - PANORAMIC	.0351	.0514	.0275	.0487

*SIGNIFICANT DIFFERENCE, ANOVA, $p < .05$

TABLE 7

DENTAL CARE NEEDS FOR RECRUITS VS. REGULARS

	<u>RECRUIT MEAN</u>	<u>REGULAR MEAN</u>	<u>OVERALL MEAN</u>	<u>SIG DIFF*</u>
V07 - 1 SURF REST	2.692	.922	1.582	YES
V08 - 2 SURF REST	.942	.465	.643	YES
V09 - 3 + SURF REST	.256	.114	.167	YES
V10 - JACKETS/CROWNS	.109	.038	.064	YES NO
V11 - FX BR ABUTS	.128	.124	.125	NO
V12 - COMP DENT	.013	.015	.014	NO
V13 - REM PAR DENT	.042	.053	.049	NO
V14 - EXTRACTIONS	.493	.139	.271	YES
V15 - ANT ENDO	.057	.015	.031	YES
V16 - POST ENDO	.057	.009	.027	YES
V17 - PROPHYLAXIS	.916	.905	.909	NO
V18 - SCALING	.766	.661	.700	YES
V19 - PERIO TX	.070	.076	.074	NO
V20 - BITE WINGS	.916	.872	.889	YES
V21 - FULL MOUTH	.067	.080	.075	NO
V22 - PANORAMIC	.314	.255	.277	NO

*ANOVA, $p < .05$

TABLE 8

COMPARISON OF DENTAL CARE NEEDS IN MILITARY POPULATIONS

	PRESENT STUDY RECRUITS	AOHMP ²	AIR FORCE RECRUITS ³	ARMY RECRUITS 1969 ⁴
V07 - 1 SURF REST	2.69		3.55	2.95
V08 - 2 SURF REST	.94	4.26		1.49
V09 - 3 + SURF REST	.25		2.65	.63
V10 - JACKETS/CROWNS	.10	N/A	.20 (ANT) .62 (POST)	.23
V11 - FX BR ABUTS	.12	N/A	N/A	.68
V12 - COMP DENT	.01	.01	0	.01 (MAX)
V13 - REM PAR DENT	.04	.09	.06	.01 (MAND) .06 (MAX)
V14 - EXTRACTIONS	.43	.99	.17	.08 (MAND) 1.03
V15 - ANT ENDO	.06		.21	N/A
V16 - POST ENDO	.06	.07	.32	N/A
V17 - PROPHYLAXIS	.91		.87 (PLAQUE)	.54
V18 - SCALING	.76	.95	.51	.71
V19 - PERIO TX	.07	.07	N/A	N/A

(Gingivectomy)

APPENDIX A

OFDEX STUDY

DENTAL CARE REQUIREMENTS DATA

(PLEASE READ INSTRUCTIONS ON THE REVERSE SIDE OF THIS FORM CAREFULLY)

SECTION I: For installation use only

- A. Patient SSAN (Last 4)
- B. Installation UIC ☐ ☐ ☐ ☐ ☐ 1, 2, 3, 4, 5
- C. Clinic Number ☐ ☐ 6, 7
- D. Category "R" ☐ 8

SECTION II: Each item MUST contain a numerical entry.

- | | | |
|--|---|--------|
| 1. Age at nearest birthday. | <input type="checkbox"/> <input type="checkbox"/> | 9, 10 |
| 2. Rank (See coding instructions) | <input type="checkbox"/> | 11 |
| 3. Sex (Male = 1, Female = 2) | <input type="checkbox"/> | 12 |
| 4. Interval since last exam or treatment (See coding instr.) | <input type="checkbox"/> <input type="checkbox"/> | 13, 14 |
| 5. Number of required restorations: One Surface | <input type="checkbox"/> <input type="checkbox"/> | 15, 16 |
| Two Surface | <input type="checkbox"/> <input type="checkbox"/> | 17, 18 |
| Three + Surfaces | <input type="checkbox"/> <input type="checkbox"/> | 19, 20 |
| 6. Number of required Jackets/Crowns (Exclude Bridge Abutments) | <input type="checkbox"/> <input type="checkbox"/> | 21, 22 |
| 7. Number of required Fixed Bridge Abutments | <input type="checkbox"/> <input type="checkbox"/> | 23, 24 |
| 8. Number of complete Dentures required | <input type="checkbox"/> | 25 |
| 9. Number of Removable Partial Dentures required | <input type="checkbox"/> | 26 |
| 10. Number of Extractions required (Exclude asymptomatic third molars) | <input type="checkbox"/> <input type="checkbox"/> | 27, 28 |
| 11. Number of Anterior teeth requiring Endodontic treatments | <input type="checkbox"/> <input type="checkbox"/> | 29, 30 |
| 12. Number of Posterior teeth requiring Endodontic treatments | <input type="checkbox"/> <input type="checkbox"/> | 31, 32 |
| 13. Dental Prophylaxis required (No = 0, Yes = 1) | <input type="checkbox"/> | 33 |
| 14. Calculus Removal required (No = 0, Yes = 1) | <input type="checkbox"/> | 34 |
| 15. Periodontal treatment required (No = 0, Yes = 1, See Instr.) | <input type="checkbox"/> | 35 |
| 16. Type of Radiographs required: Bite-wings | <input type="checkbox"/> | 36 |
| (No = 0, Yes = 1) Full mouth Periapicals | <input type="checkbox"/> | 37 |
| Panoramic | <input type="checkbox"/> | 38 |

OPTIMAL FREQUENCY FOR CONDUCTING PERIODIC DENTAL EXAMINATIONS (OFDEX)

INSTRUCTIONS FOR RECORDING DATA ON THE OFDEX FORM

Be sure that all of the boxes are filled in. LEAVE NO BLANKS. Enter "0" where no other number is required. EXAMPLE: If a patient requires two extractions, enter the numbers .

SECTION I:

- Line A. Enter the last four digits of the patient's Social Security Number. This information is for internal purposes only. It will not be recorded elsewhere or used in the analysis of the data.
- Line B. This information should be pre-entered by the HCSD project officers. If blank, consult your clinic NCOIC.
- Line C. Enter your clinic number. If not known, consult your clinic NCOIC.
- Line D. To be completed by Project officers only.

SECTION II:

1. Age - Enter the patient's age at the nearest birthday anniversary.

EXAMPLE: If the examination is done in October and the patient's birth month is January, enter the age that person will attain in that month.

2. Rank - In the boxes to the right enter the appropriate number using the following code:

E1 - E4 = 1
E5 - E6 = 2

E7 - E9 = 3
W1 - W4 = 4

O1 - O3 = 5
O4 = 6
O5 - O6 = 7

3. Sex - Self-explanatory.
4. Interval since last exam or treatment: This information will be pre-coded by HSC Project Officers.
5. Number of required Restorations: If a one-surface carious lesion is present but will require a two-surface restoration, mark the data sheet to reflect a two-surface restoration.
6. Items 6, 7, 8, and 9 should also include jackets, crowns, and complete or partial dentures which need replacement.
7. Number of Extractions required: Exclude asymptomatic third molars, whether erupted or unerupted, functional or non-functional.
8. Items 11 and 12 regarding endodontic treatment should reflect only those teeth that you feel could be realistically treated. Availability of resources to provide endodontic treatment should not be a factor in your consideration. Indicate "Yes" if you feel the patient requires definitive periodontal treatment beyond prophylaxis or scaling. If you would refer the patient only for a consult, indicate "No".
9. Item 15, Periodontal treatment required: If prophylaxis and/or calculus removal is required in conjunction with definitive periodontal treatment, mark items 13 and 14 accordingly.

DISTRIBUTION:

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**DATA
FILM**